



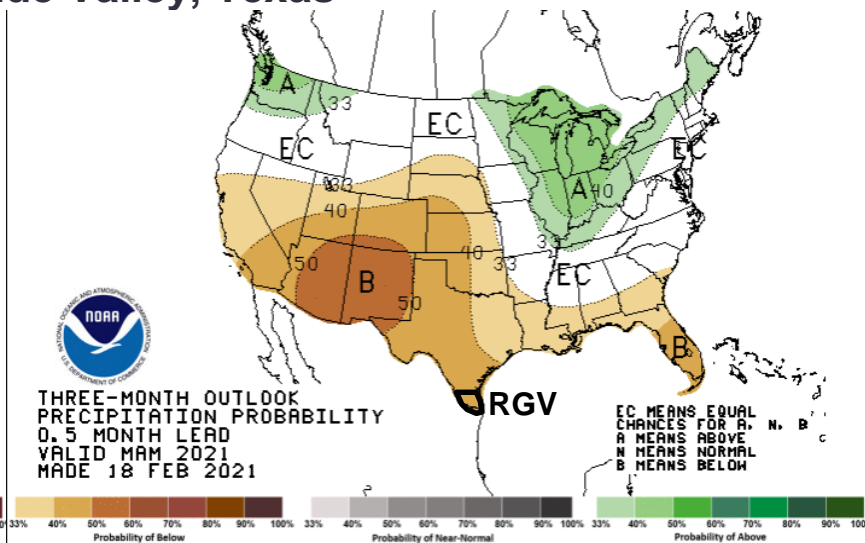
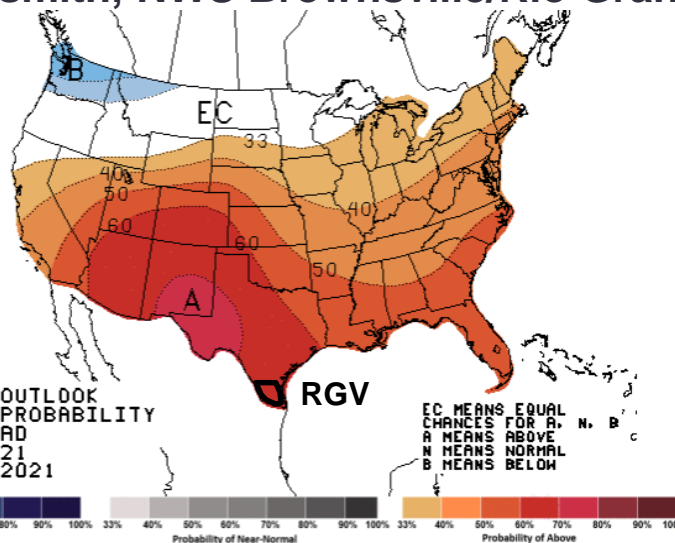
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# NOAA Spring (March-May) 2021 Outlook Perspective for the Rio Grande Valley/Deep S. Texas Region

March 1, 2020

Barry Goldsmith, NWS Brownsville/Rio Grande Valley, Texas



# Key Takeaways

- **Above to much above average temperatures** and **below average precipitation** remains the forecast
- Based on this forecast becoming reality:
  - **Drought** will **worsen by the end of May**. **Extreme to Exceptional Drought** will cover all areas by the end of May. **Exceptional Drought** arrives in March across the ranch country.
  - **Wildfire spread threat will become extreme** based on the combination of “super” freeze-cured fuels with additional drying. Each month could have critical low humidity and strong wind events conducive to **explosive** wildfire spread.
  - **Municipal and Agricultural water shortages** are now expected to be an issue in mid to late spring as Falcon Reservoir will remain low – and need releases from Amistad to assist.
  - The threat for **Widespread Severe Weather (Wind/Hail)** is slim, but local events cannot be ruled out, particularly in May.



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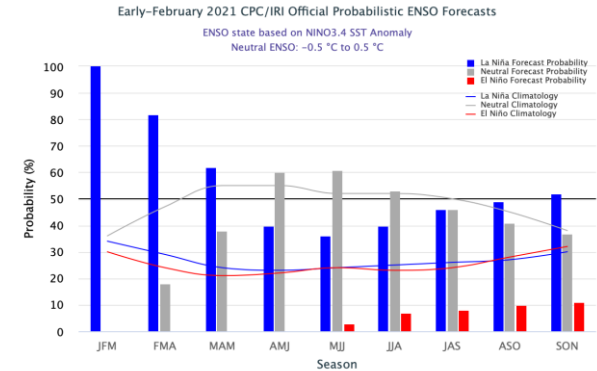
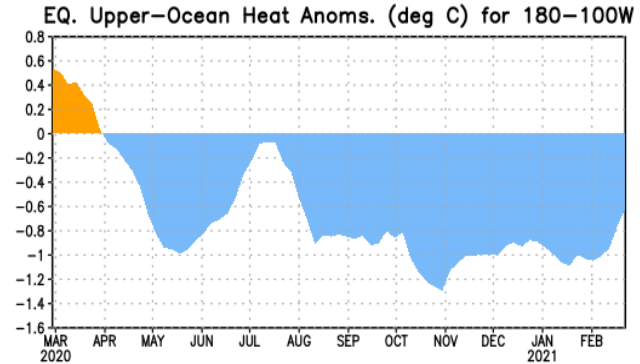
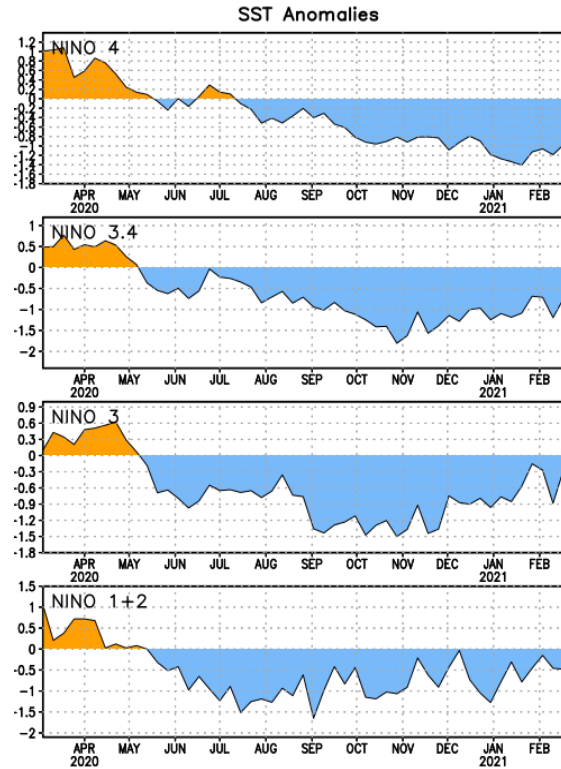
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# The “Why” of the Forecast: La Niña, Locked In

- Moderate La Niña continues (blue colored areas; -1 to -1.5), and should remain so through March or April
- Persistent warmth over several years in the southwest U.S./northern Mexico is expected to continue

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2



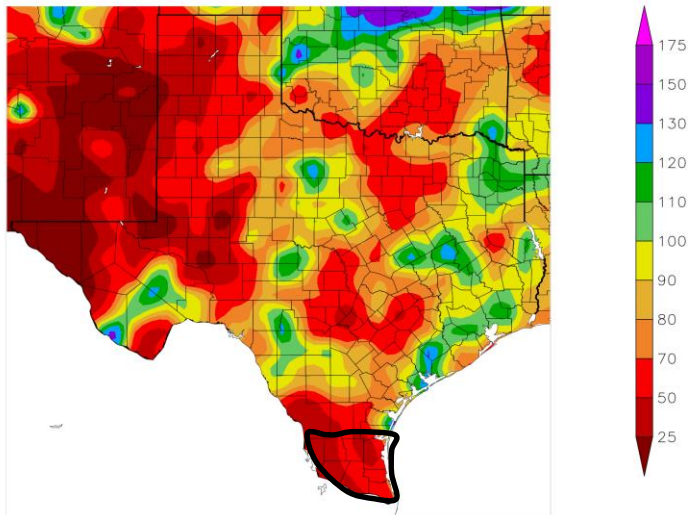
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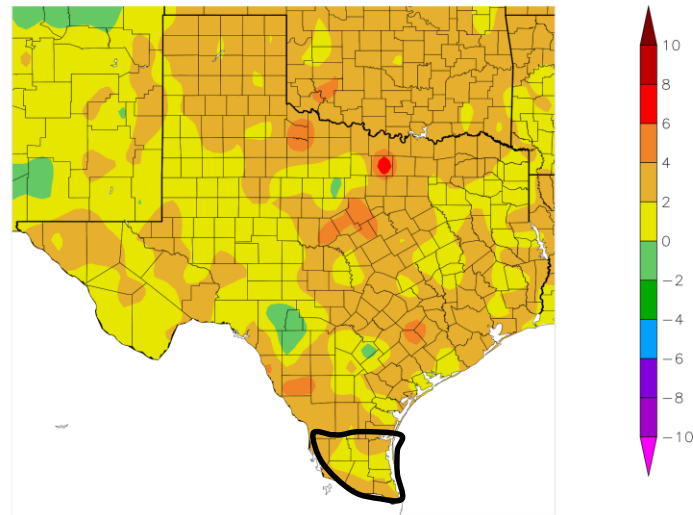
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# November 2020 through January 2021: Table...Set

Percent of Normal Precipitation (%)  
11/1/2020 – 1/31/2021



Departure from Normal Temperature (F)  
11/1/2020 – 1/31/2021



Generated 2/20/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers Generated 2/20/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Dry to Very Dry Compared with Average. Rainfall generally 0.75 to 3 inches (west to east) (average: 3 to 4.5 inches)
- Temperatures 1 to 3 degrees above average; November was well above (4 to 6 degrees), while December and January were closer to average (1 to 2 degrees)
- Due to frequent “dry” fronts, drought continued to worsen by February 1, 2021



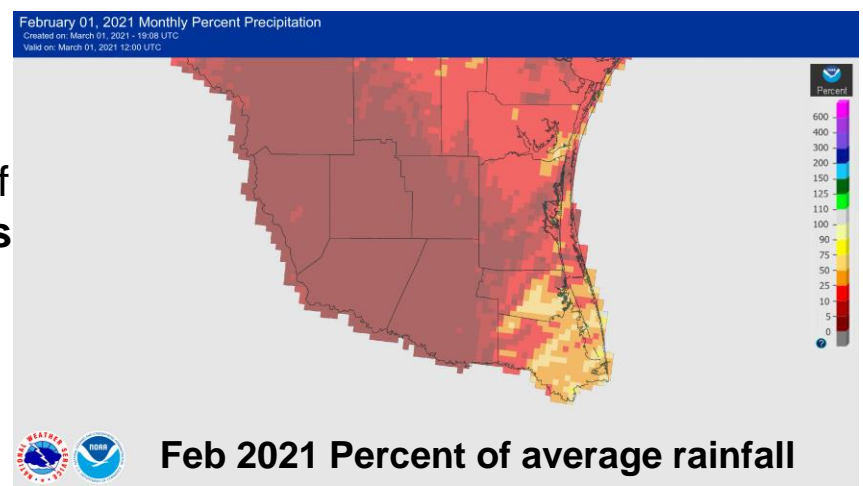
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# February 2021

- “Freeze Dried!” Mid-month, prolonged cold/extreme cold, unprecedented for the time of year in the last 100 years, **super-cured all fuels by drought and dormancy.**
- Another month with **below average** rainfall contributed; month ended with severe to extreme drought in most agricultural and ranch areas
- Cold snap was followed by a huge warm-up; while month ended up well below average ( $-4^{\circ}\text{F}$ ), the rank was in the Top 15 to Top 25 coldest, rather than the Top 5/10 coldest

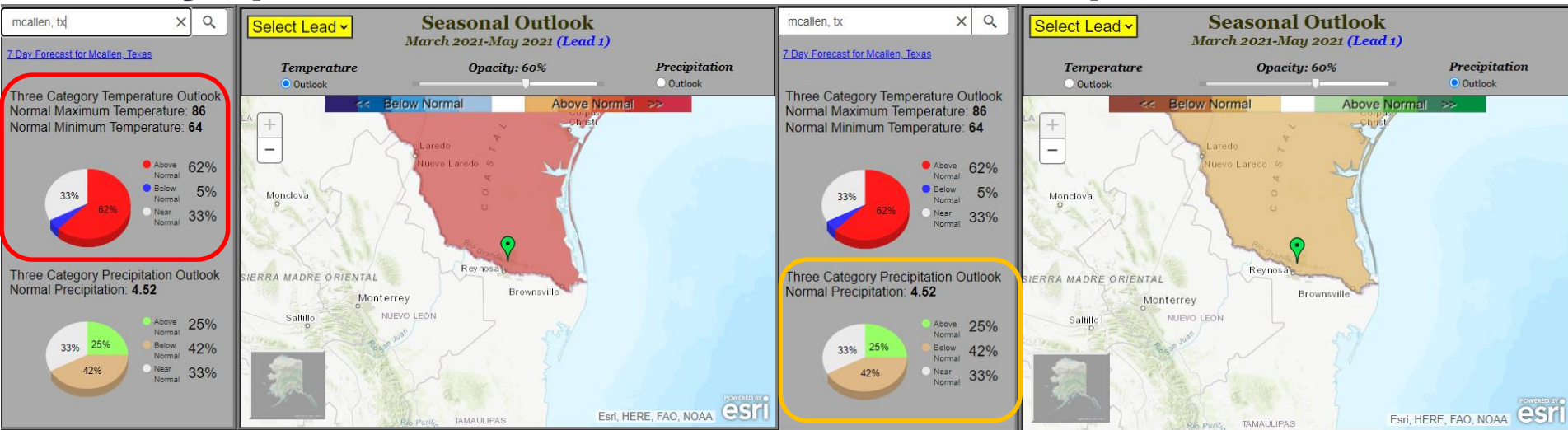


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# The March-May 2021 Outlook: Rio Grande Valley (McAllen as Anchor Point)



- **Temperature:** A 62% chance of above average. Seasonal average – Afternoons, Rising from ~77° (on 3/1) to ~94° on 5/31). Mornings: Rising from 50-55° (3/1) to 70-74° (5/31). Just a 5% chance of below average in 2021.
- **Rainfall:** A 42% chance of below average. Seasonal average: 4 to 5.5 inches of rainfall
- **Probability of above average precipitation is 25 percent.**

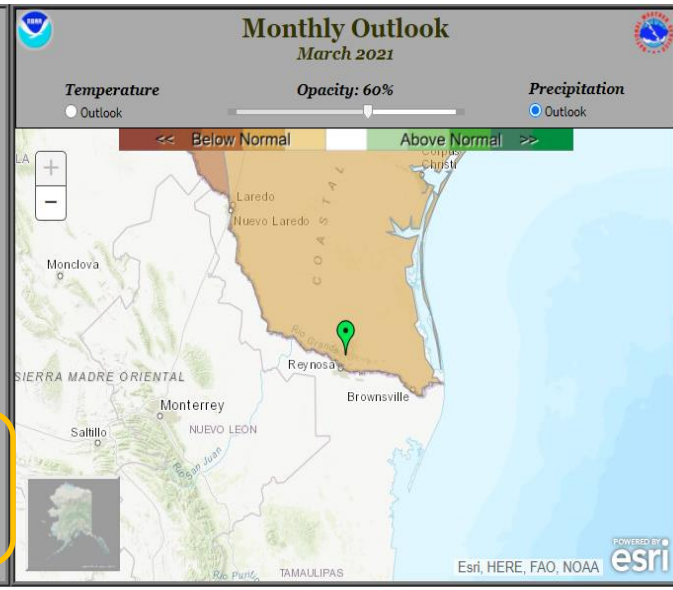
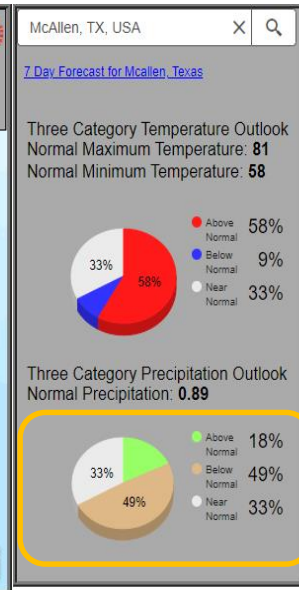
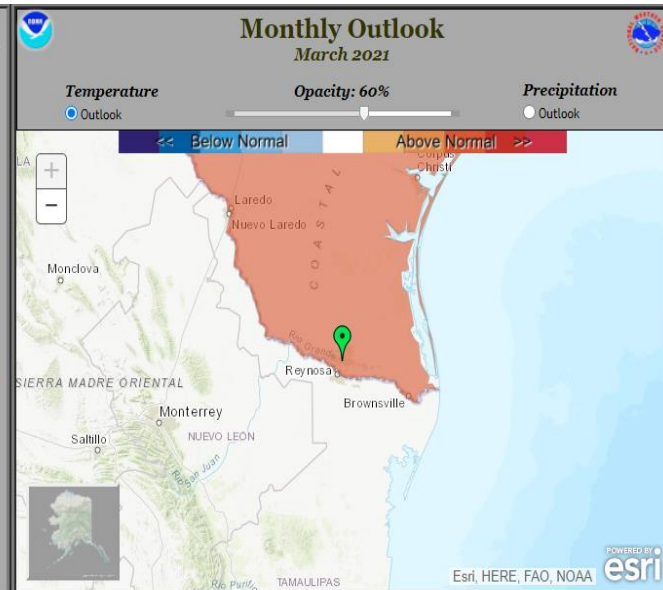
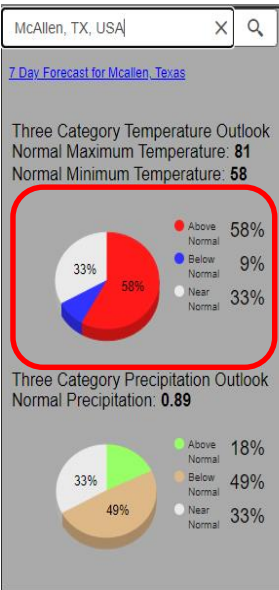


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# March Outlook: Rio Grande Valley (McAllen as Anchor Point)



- Temperature: A 58% chance of **above average**. Monthly average – Afternoons, Rising from ~77° to ~84°. Mornings: Rising from ~55 to 61°. Just a 9% chance of below average.
- Precipitation: A 49% chance of **below average**. Monthly average: 1 to 1.5 inches of rainfall. An 18% chance of above average.



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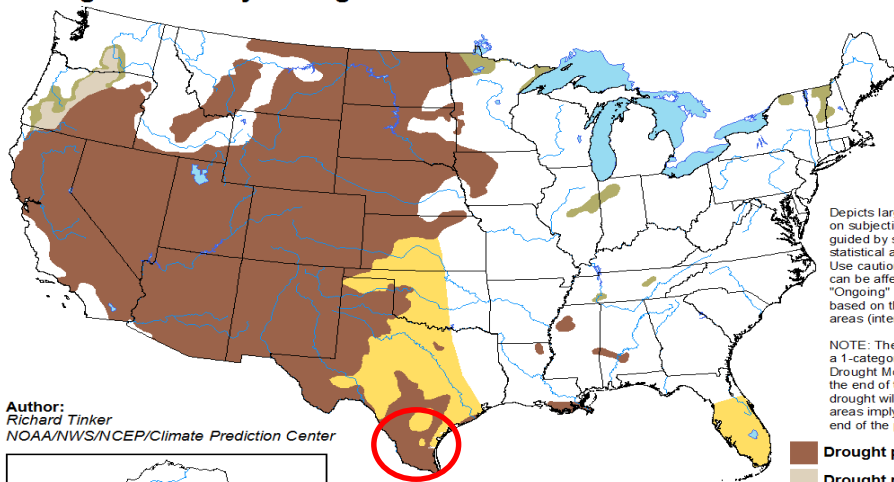
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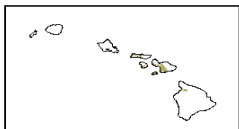
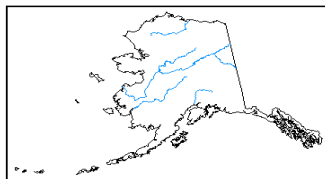
# The “Droughtlook”

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for February 18 - May 31, 2021  
Released February 18



Author:  
Richard Tinker  
NOAA/NWS/NCEP/Climate Prediction Center



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. \*Ongoing\* drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

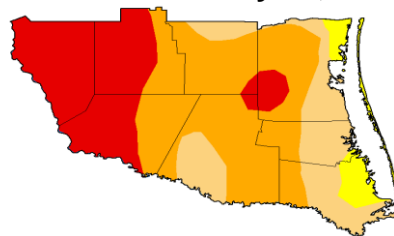
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>

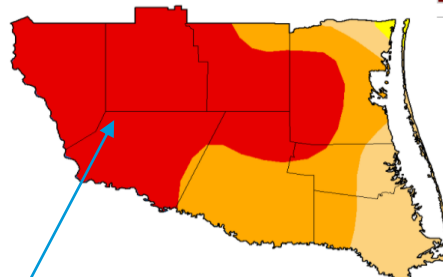
Observed: January 21, 2021



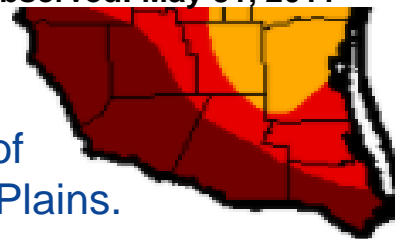
### Drought Classification

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

Observed: February 23, 2021



Observed: May 31, 2011\*



\*Analog assumes very warm/dry conditions prevail

- Conditions should become similar or worse than the end of spring 2011. **Exceptional** likely to arrive in March in RG Plains.



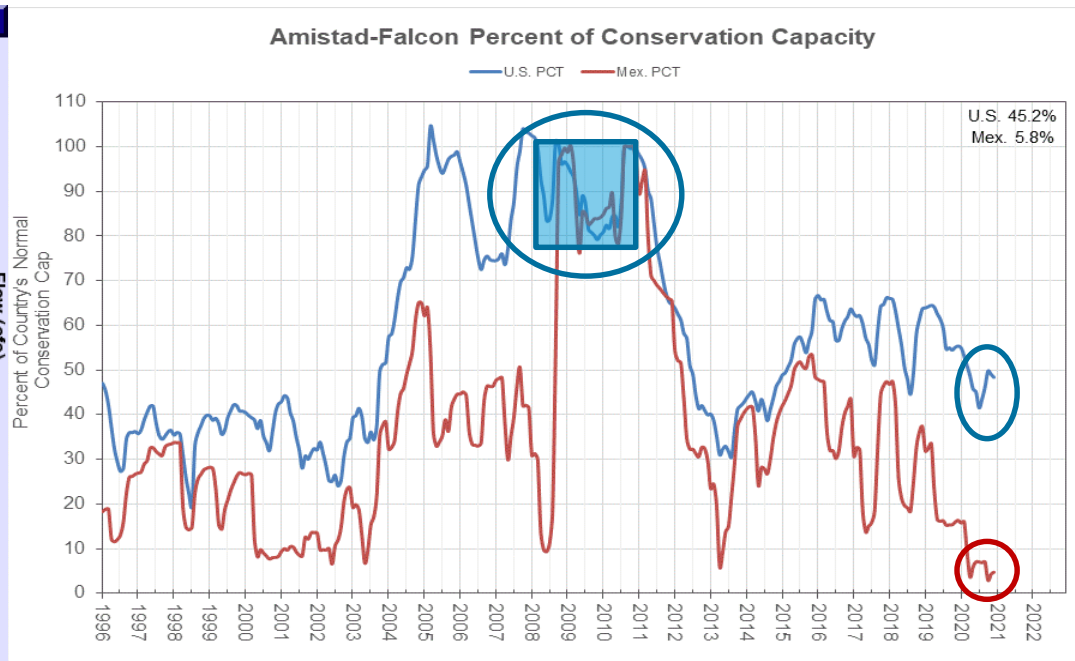
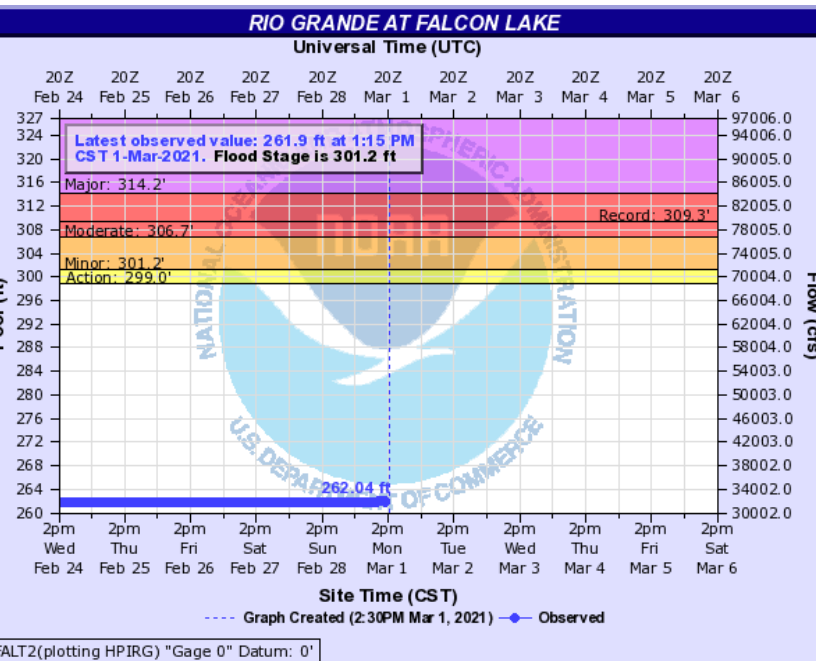
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# Falcon Reservoir remained low at the end of February 2021



- February 2021 total capacity, Falcon Reservoir: **19 percent**
- February 2011 total capacity, Falcon Reservoir: around **95 percent**



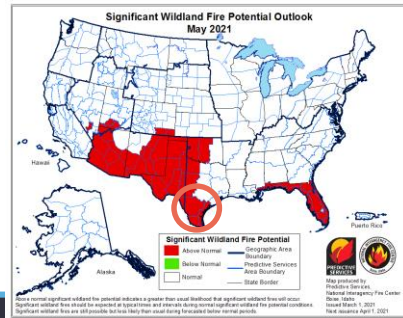
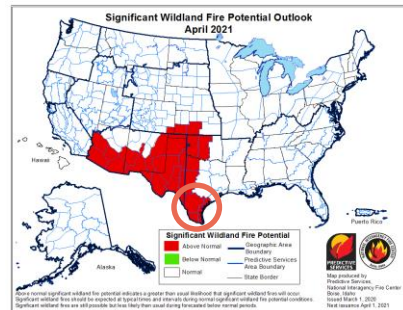
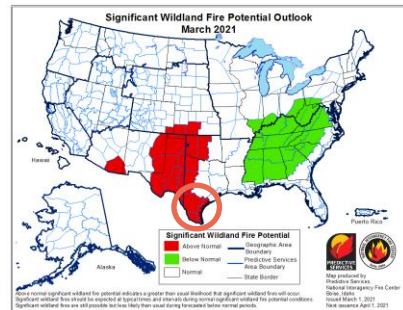
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# Wildfire Spread Potential Could Become **Extreme** in Spring 2021

- 1-hour fuels (grasses) were **super-cured** (dormant “litter”) by February 20<sup>th</sup>; these conditions continued through the end of the month.
- **10, 100, and 1000** hour fuels (brush and timber) also sustained **freeze-curing**; greatest impacts across locations west of IH-69C/US 281 (western Brooks/Hidalgo through Zapata)
- Wildfire spread **will depend on wind**, given that green-up will be spotty, even in March.
- **Explosive spread conditions** are likely on days with northwest wind/warm to hot temperatures/very low humidity. **Best chances** for these are **April and May**



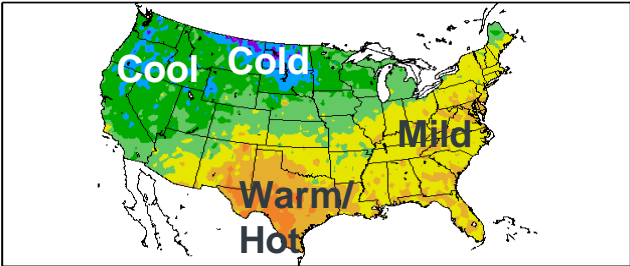
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# 2021 vs. 2011

Departure from Normal Temperature (F)  
3/1/2011 – 5/31/2011

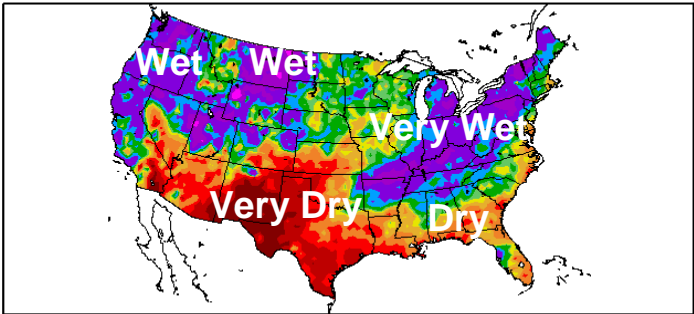


**Observed  
Mar-May 2011**

Generated 6/15/2012 at HPRCC using provisional data.

Regional Climate Centers

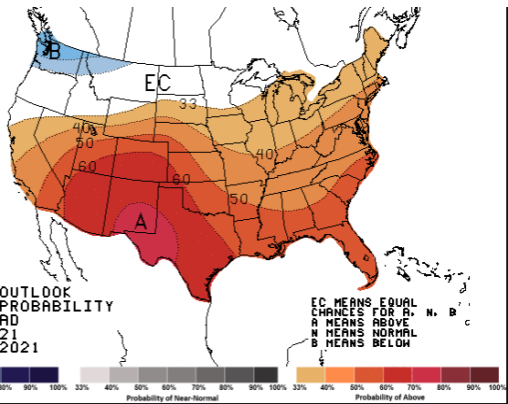
Percent of Normal Precipitation (%)  
3/1/2011 – 5/31/2011



Generated 6/15/2012 at HPRCC using provisional data.

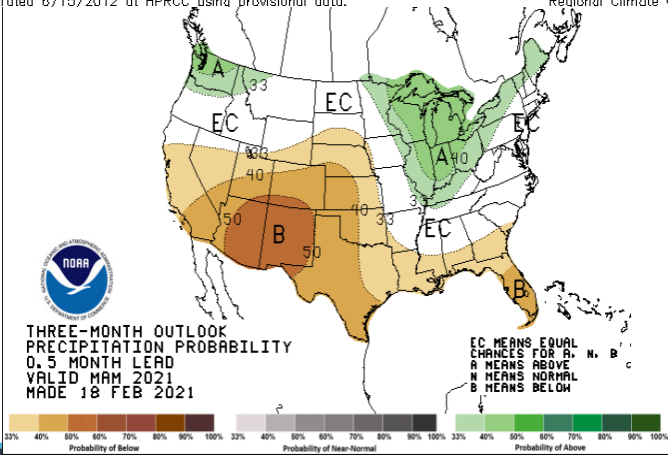
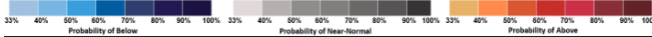
Regional Climate Centers

**Forecast  
Mar-May  
2021**



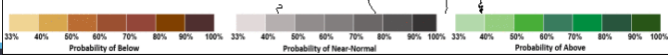
THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.5 MONTH LEAD  
VALID MAR 2021  
MADE 18 FEB 2021

EC MEANS EQUAL  
CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW



THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0.5 MONTH LEAD  
VALID MAR 2021  
MADE 18 FEB 2021

EC MEANS EQUAL  
CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW

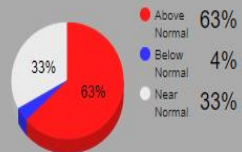


# April-June 2021 Outlook: More of the Same?

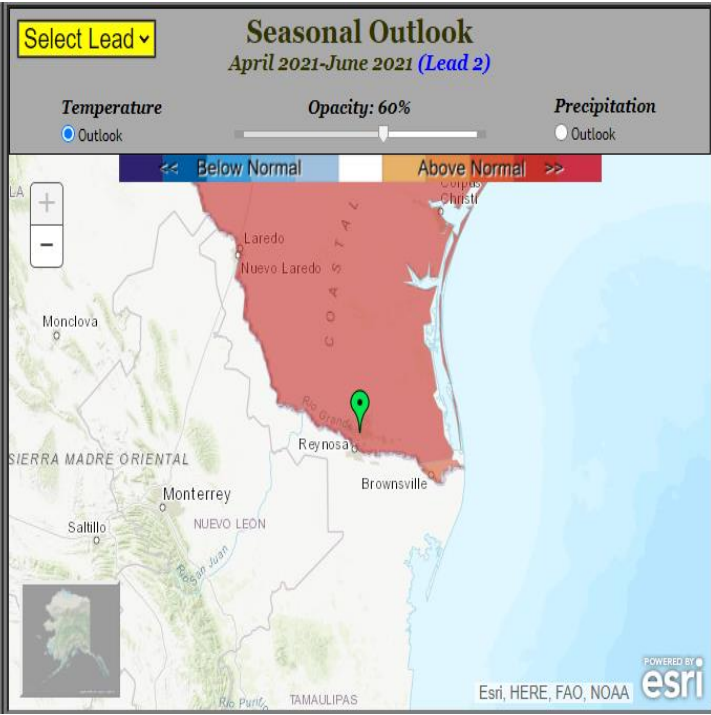
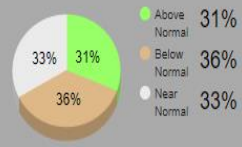
mcallen, tx

7 Day Forecast for McAllen, Texas

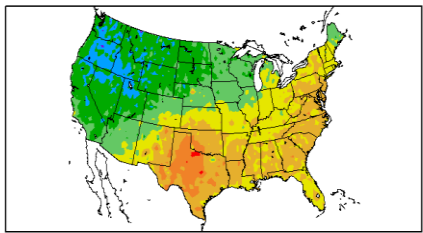
Three Category Temperature Outlook  
Normal Maximum Temperature: 91  
Normal Minimum Temperature: 70



Three Category Precipitation Outlook  
Normal Precipitation: 5.87

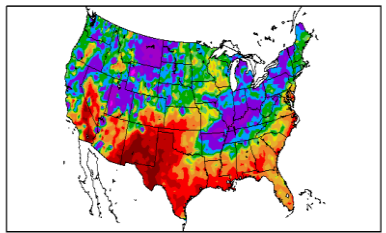


Departure from Normal Temperature (F)  
4/1/2011 - 6/30/2011



Generated 6/15/2012 at HPRCC using provisional data.

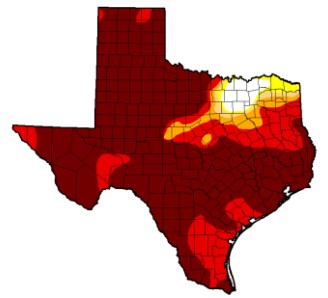
Percent of Normal Precipitation (%)  
4/1/2011 - 6/30/2011



Regional Climate Centers rerouted 6/15/2012 at HPRCC using provisional data.

## Drought Classification

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)



2021 Forecast, March – May (McAllen) – Updated 12/17/2020

Drought, June 28, 2011



# In Summary: Impacts and Actions

- **Finalize wildland management plans** ahead of what is potentially an active to explosive wildfire growth period in spring and early summer 2021.
- Do **everything you can to promote wildfire prevention**, all spring long. Start at [weather.gov/safety/wildfire](https://weather.gov/safety/wildfire), [smokeybear.com](https://smokeybear.com), and [firewise.org](https://firewise.org).
- Increasing confidence in **extreme** to **exceptional** drought as early as late March means **now is the time** to look at agriculture and municipal water plans in case of **water shortages**.
- Gear up for **early onset of summer-like heat**, particularly during April. Heat index, or “feels like” temperatures, could rise above 105 at times. This could cause heat stress in some people due to **lack of acclimation**.
- Actual temperatures – especially in low level west to southwest flow – could hit 100°F as early as late March, from Brooks/Hidalgo Counties out to Zapata. **Several 100°F afternoons are possible** from the end of April into May in many areas away from the coast.



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